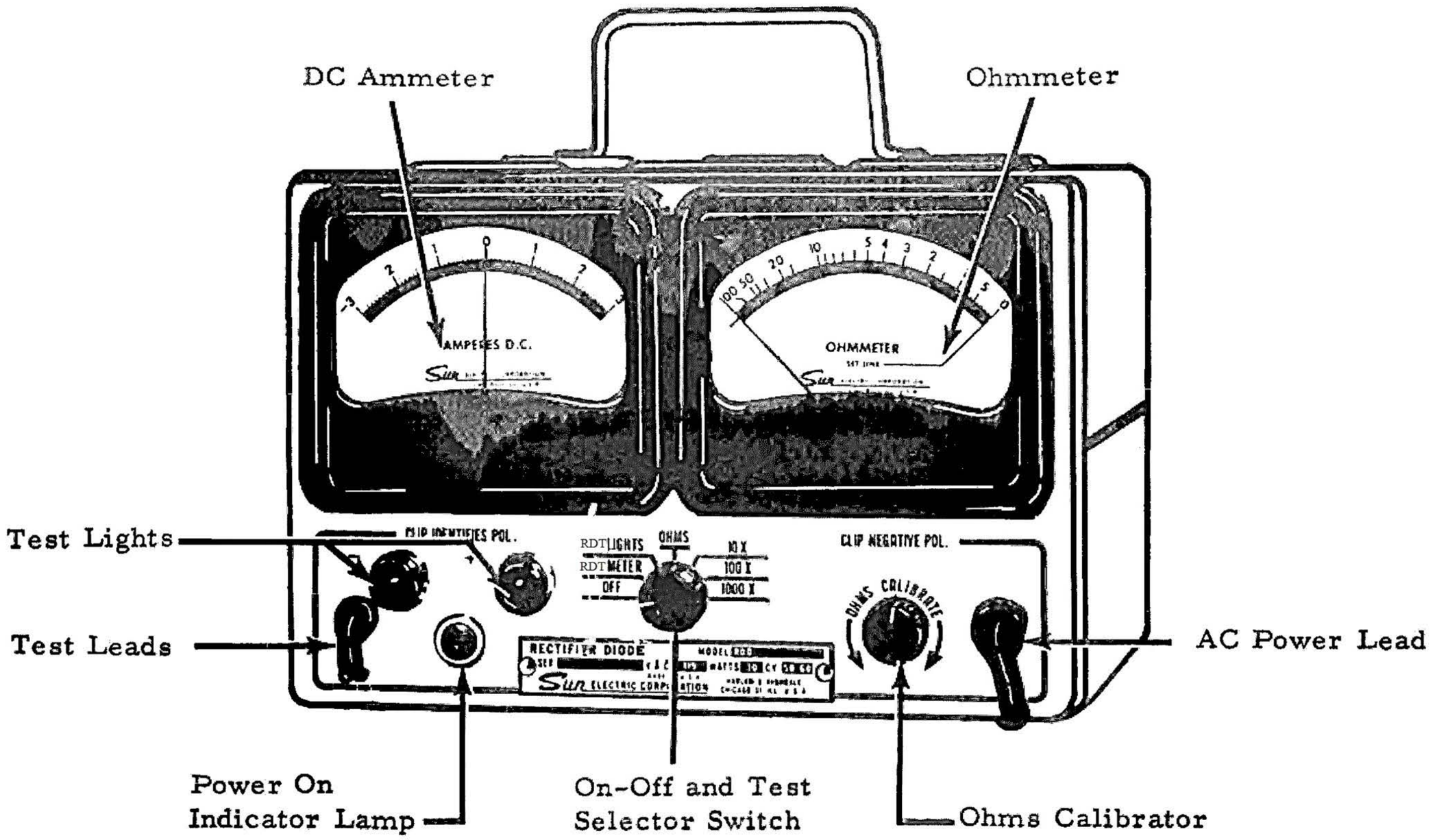
RECTIFIER DIODE OHMS TESTER
SUN MODEL RDO



The SUN MODEL RDO Rectifier Diode Tester is used to test diodes and rectifiers in automotive charging systems for either shorted, open, or reversed current leakage conditions.

The OHMMETER is designed to completely fill the testing requirements of all automotive electrical systems and components.

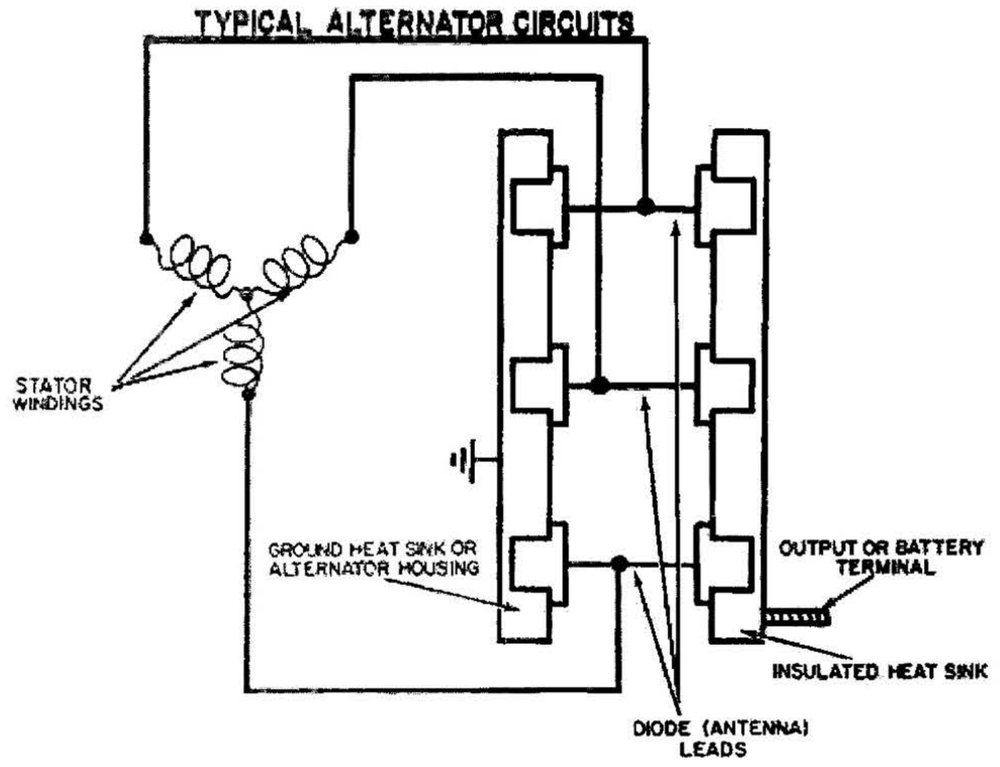
DIODE TESTING

1. Some AC Generators-Alternators are designed to permit access to the diode leads through external openings in the Generator-Alternator frame without disassembly. If necessary, disassemble Generator and remove rotor to expose diode wire leads or antennas of both diode banks for testing. Observe manufacturer's instructions when disassembling Alternators.

NOTE: Do not disconnect any diode wire lead connection at this time.

2. Plug AC Power Lead into 110 volt receptacle provided. Turn ZERO CORRECTION button located on front of Amperes DC meter until meter pointer is on the ZERO line.

NOTE: DIODES MUST PASS BOTH THE METER TEST AND LIGHT TEST TO BE CONSIDERED ACCEPTABLE.



SUN ELECTRIC CORPORATION

Harlem and Avondale — Chicago, Illinois 60631 U.S.A.

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INSULATED DIODE TEST PROCEDURE

1. Connect the test lead clip to the AC Generator-Alternator BATTERY-OUTPUT terminal, or to the insulated heat sink.

NOTE: On Motorola Alternator connect test lead clip to the AUX terminal.

2. Move TEST SELECTOR Switch to the LIGHTS position.

3. Touch the test lead prod to any one (1) diode wire lead in the insulated heat sink. Only one (1) light should glow.

   If both lights glow, or both lights fail to glow, a defective diode(s) is indicated.

4. Move the TEST SELECTOR Switch to the METER position.

5. Touch the test lead prod to the wire lead of each diode in the insulated heat sink.

   Meter reading of 1.5 amps or more for each diode tested and one light only glowing in Step 3, indicates diodes satisfactory.

   Meter reading of less than 1.5 amps on 2 diodes, and zero amps on third diode. . . diode reading zero amps is shorted. Disconnect this shorted diode from the circuit and repeat Steps 3,4, and 5 to determine the condition of remaining diodes.

   Meter reading of 1.5 amps or more for 2 diodes, and 1 amp or less on third diode, diode reading 1 amp or less is open circuited.

   If a meter reading of 1.5 amps or more is observed for each diode tested, and the Light Test indicated a faulty diode, it will be necessary to disconnect each diode and retest using the INDIVIDUAL DIODE TEST until the faulty diode(s) is located.

GROUND DIODE TEST PROCEDURE

1. Connect the test lead clip to the end frame, or to the ground heat sink.

2. Move the test SELECTOR Switch to the LIGHTS position.

3. Touch the test lead prod to any one (1) diode wire lead in the ground heat sink. Only one light should glow.

   If both lights glow, or both lights fail to glow, a defective diode(s) is indicated.

4. Move the TEST SELECTOR Switch to the METER position.

5. Touch the test lead prod to the wire lead of each diode in the ground heat sink.

   Meter reading of 1.5 amps or more for each diode tested and one light only glowing in Step 3 indicates diodes satisfactory.

   Meter reading of less than 1.5 amps on 2 diodes, and zero amps on third diode. . . diode reading zero amps is shorted. Disconnect this shorted diode from the circuit and repeat Steps 3, 4, and 5 to determine the condition of remaining diodes.

   Meter reading of 1.5 amps or more for 2 diodes, and 1 amp or less on third diode, diode reading 1 amp or less is open circuited.

   If a meter reading of 1.5 amps or more is observed for each diode tested, and the Light Test indicated a faulty diode, it will be necessary to disconnect each diode and retest using the INDIVIDUAL DIODE TEST until the faulty diode(s) is located.

INDIVIDUAL DIODE TEST AND POLARITY IDENTIFICATION

1. Connect test lead clip to the diode case.

2. Move the TEST SELECTOR Switch to the LIGHTS position.

3. Touch the test lead prod to the diode lead.

   Only one light should glow indicating the diode is not defective. If both lights glow, or both lights fail to glow, the diode is defective.

   The identification mark next to the glowing light indicates the polarity of the diode case. When the clip is connected to the diode case and the light marked positive (+) glows while testing, the clip identifies the case as positive. Should the light marked negative (-) glow, the diode case would be negative.

Motorola Isolation Diode Test

1. Connect test lead clip to the Alternator BATTERY-OUTPUT terminal.

2. Move TEST SELECTOR Switch to the LIGHTS position.

3. Touch Test Lead Prod to the AUX terminal only one (1) light should glow, if both lights

glow, or both lights fail to glow, a defective diode(s) is indicated.

4. Move TEST SELECTOR Switch to the METER position.

5. Touch Test Lead Prod to the AUX terminal.
   Meter reading of 1.5 amps or more indicates diode(s) satisfactory.
   Meter reading of less than 1.5 amps indicates a faulty diode(s).

RECTIFIER PLATE TEST

1. Move the TEST SELECTOR Switch to the METER position.

2. Connect test lead clip to the DC positive (+) terminal of the rectifier assembly.

3. Touch test lead prod to each phase connection of rectifier assembly.

4. Meter will indicate 1.5 amps or better at each phase terminal of serviceable rectifier assembly.

   Reading of 1.5 amps or more on 2 terminals, and 1 amp or less on 1 terminal. . . terminal indicating 1 has an open plate.

   Reading of less than 1.5 amps on 2 terminals and zero on 1 terminal. . . terminal indicating zero has a shorted plate.

5. Connect test lead clip to the DC negative (-) terminal of rectifier assembly.

6. Touch test lead prod to each phase connection of rectifier assembly.

7. Meter will indicate 1.5 amps or better at each phase terminal of serviceable rectifier assembly.

   Reading of less than 1.5 amps on 2 terminals, and zero on 1 terminal. . . terminal indicating zero has a shorted plate.

   Reading of 1.5 amps or more on 2 terminals, and 1 amp or less on 1 terminal. . . terminal indicating 1 has an open plate.

OHMMETER TESTS

The four Ohmmeter ranges provided in this tester may be used for testing the condition and continuity of the automotive electrical systems and components. The Ohmmeter scale reads from right to left and is graduated from 0 to 100. With the OHM Selector Switch set in the OHMS position, resistance readings are as indicated on the meter. When the OHM Selector Switch is set in the X 10, X 100, X 1000 position, meter readings are multiplied by 10, 100 or 1000 respectively.

Turn Zero Correction Button located on front of Ohmmeter until meter pointer is on left end line of scale band.

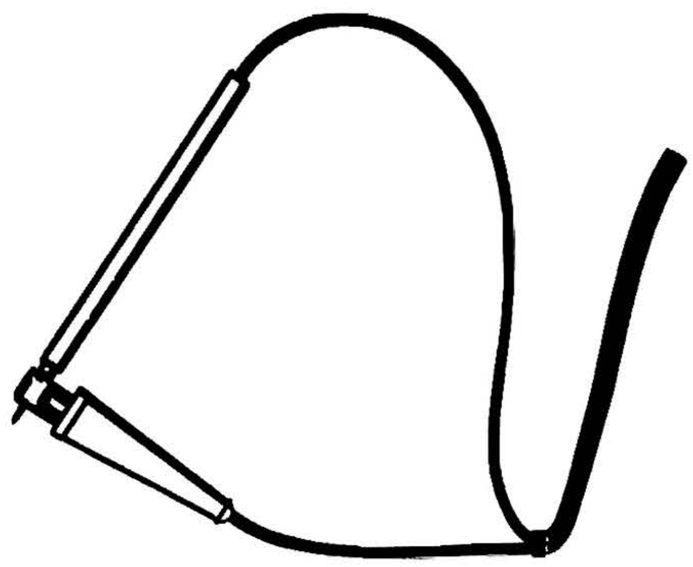
CAUTION: Do not connect leads of Ohmmeter across any source of voltage. For accurate test indications, the unit or portion of circuit being tested must be electrically isolated from all other portions of the electrical system.

1. Turn OHM Selector Switch to the desired Ohmmeter range.

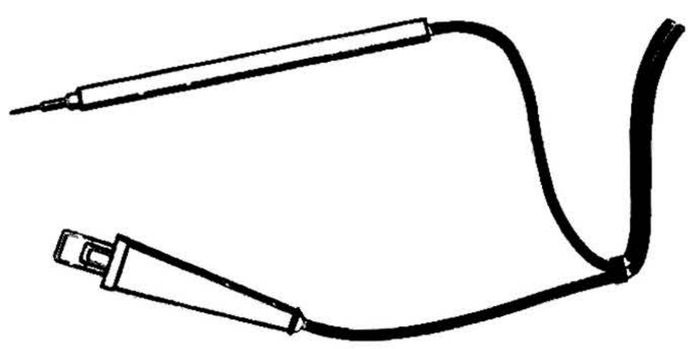
2. Connect test leads together.

3. Adjust OHM CALIBRATOR Knob until meter pointer reads on Zero of the Ohmmeter scale.

4. Disconnect test leads and connect them one to each end of unit or portion of circuit to be tested.



CALIBRATION



TESTING